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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,463

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Sabrina Higgins

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EXAMINER

MCKANE, ELIZABETH L

ART UNIT

PAPER NUMBER

1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,463	Applicant(s) HIGGINS ET AL.	
	Examiner ELIZABETH L. MCKANE	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKechnie et al. (WO 01/76371) in view of Blanc (US 5,635,132).

McKechnie et al. teaches a method of deactivating a dust mite allergen wherein a deactivating compound in the form of an oil-in-water emulsion of a terpene-containing essential oil is dispersed into the airspace as a vapor. See page 2, lines 17-20 and 26. The oil may be dispersed by heat applied to the emulsion (page 3, lines 8-9).

McKechnie et al. discloses using the terpene in an amount of 5%. See page 4, lines 30-33. Blanc also discloses a method of dispersing terpene-containing essential oils into an airspace in order to control dust mite allergens. See col.1, lines 61 to col.2, line 11; col.3, lines 38-40. Blanc teaches that the essential oils may be used in amount up to 20% of the composition.

Thus, it would have been obvious to one of ordinary skill in the art to increase the amount of terpene-containing essential oil in the oil-in-water emulsion of McKechnie et al. where the level of dust mite allergens was very large as Blanc evidences the safety of using essential oils at high concentrations. It is further noted that concentration is a

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known result effective variable. It is within the purview of one in the art to optimize the concentration of the essential oil in McKechnie et al. as being a result effective variable.

Moreover, as to contact time of the essential oil with the air, again this is a readily optimized result effective variable. One of ordinary skill in the art would have found it obvious to optimize contact time for the most efficient treatment of the space.

3. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKechnie et al. and Blanc as applied to claims 1 and 8 above, and further in view of Franklin et al. (WO 03/070286).

While McKechnie et al. teaches use of terpene hydrocarbons as the deactivant, the use of β -pinene is not disclosed. McKechnie et al. also is silent with respect to a non-ionic surfactant. Franklin et al. discloses a composition for control of dust mite allergens within a space. See page 5, line 14-15; page 8, lines 7-9, lines 20-27. The composition contains a terpene, water, and a non-ionic surfactant and the terpene may be pinene. See page 9, lines 4-11; page 17, lines 25 and 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to use pinene as the terpene of McKechnie et al. since Franklin et al. has evidenced its effectiveness against a variety of airborne contaminants, including dust mite allergens. Moreover, one would have found it obvious to employ a surfactant in the composition of McKechnie et al. since Franklin et al. teaches that some terpenes “may need a surfactant to form a relatively homogeneous mixture with water.” See col.19, lines 11-13.

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4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over McKechnie et al. and Blanc as applied to claim 1 above, and further in view of Pullen (US 6,500,445).

While McKechnie et al. teaches use of terpene-containing essential oils as the deactivant, the use of orange oil is not disclosed. Pullen discloses a composition for control of dust mite allergens within a space. See Abstract. The composition contains a terpene-containing essential oil such as orange oil. See col.2, lines 48-62. It would have been obvious to one of ordinary skill in the art at the time of the invention to use orange oil as the terpene-containing essential oil of McKechnie et al. since Pullen teaches that terpene-containing essential oils such as orange oil are effective, non-toxic pesticides for dust mites.

5. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 2002/0022043) in view of Franklin et al..

Miller teaches a composition for the control of dust mites comprising an essential oil as a component of a solution (paragraph [0011]). The essential oil is used in an amount of 11.49% (paragraph [0060]) and can be lemongrass oil (paragraph [0007]). Although Miller discloses that a solution of the essential oil can be used, an oil-in-water emulsion is not specifically taught. Franklin et al. also discloses an oil-in-water emulsion for control of dust mite allergens within a space. See page 5, line 14-15; page 8, lines 7-9, lines 20-27. The composition contains a terpene, water, and a non-ionic surfactant. See page 9, lines 4-11; page 17, lines 25 and 30. Moreover, the terpene can be used in the form of its essential oil (page 17, lines 5-6). It would have been

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obvious to one of ordinary skill in the art to employ the essential oil of Miller in the form of an oil-in-water emulsion in order to facilitate use of the essential oil while avoid waste. Moreover, one would have found it obvious to employ a surfactant in the composition of Miller since Franklin et al. teaches that some terpenes “may need a surfactant to form a relatively homogeneous mixture with water.” See col.19, lines 11-13.

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKechnie et al. in view of Blanc and Franklin et al..

McKechnie et al. teaches a method of deactivating a dust mite allergen wherein a deactivating compound in the form of an oil-in-water emulsion of a terpene-containing essential oil is dispersed into the airspace as a vapor. See page 2, lines 17-20 and 26.

The oil may be dispersed by heat applied to the emulsion (page 3, lines 8-9).

McKechnie et al. discloses using the terpene in an amount of 5% and is silent with respect to use of a non-ionic surfactant. See page 4, lines 30-33. Blanc also discloses a method of dispersing terpene-containing essential oils into an airspace in order to control dust mite allergens. See col.1, lines 61 to col.2, line 11; col.3, lines 38-40.

Blanc teaches that the essential oils may be used in amount up to 20% of the composition.

It would have been obvious to one of ordinary skill in the art to increase the amount of terpene-containing essential oil in the oil-in-water emulsion of McKechnie et al. where the level of dust mite allergens was very large as Blanc evidences the safety of using essential oils at high concentrations. It is further noted that concentration is a

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known result effective variable. It is within the purview of one in the art to optimize the concentration of the essential oil in McKechnie et al. as being a result effective variable.

Franklin et al. also discloses a composition for control of dust mite allergens within a space. See page 5, line 14-15; page 8, lines 7-9, lines 20-27. The composition contains a terpene, water, and a non-ionic surfactant and the terpene may be lemongrass oil. See page 9, lines 4-11; page 17, lines 5-6, 25 and 30. It would have been obvious to employ a surfactant in the composition of McKechnie et al. since Franklin et al. teaches that some terpenes "may need a surfactant to form a relatively homogeneous mixture with water." See col.19, lines 11-13. Furthermore, one would have found it obvious to employ lemongrass oil as the terpene since Franklin et al. has evidenced the usefulness of lemongrass oil in the control of dust mites.

Response to Arguments

7. Applicant's arguments filed 5 January 2009 have been fully considered but they are not persuasive.

8. On pages 10-11 of the Response, Applicant argues that as Blanc discloses the use of true aerosols, not emulsions, it is not applicable to the invention of McKechnie et al.. However, the Examiner submits that Blanc discloses the motivation to increase the amount of essential oil in a composition with *known results*. Regardless of whether the composition is an emulsion or a solution, the essential oil contained therein is the effective ingredient. Applicant has failed to provide evidence that one would not expect an increase in essential oil to provide a decrease in the dust mite population. Thus, an

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increase in essential oil from 5% to 8% is considered to be obvious in the absence of unexpected results.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH L. MCKANE whose telephone number is (571)272-1275. The examiner can normally be reached on Mon-Fri; 5:30 a.m. - 2:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth L McKane/
Primary Examiner, Art Unit 1797

elm
10 May 2009